

# CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society  
Of America

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No. 2



Introducing Dr. R. W. Poindexter, horticulturist, *Journal* translator, and friend of all cactus people. Specializing in *Echinocereus*, Dr. Poindexter finds this tall growing *E. pensilis* most unusual. Haselton photo courtesy *Sunset Magazine*.



## CACTUS AND SUCCULENT JOURNAL

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## SCHEDULE FOR THE NEXT TWO MEETINGS

## Sunday, August 28th

Sponsored by the Affiliated Long Beach Cactus and Succulent Society. Meet at 10:30 A. M. at the Bixby Ranch Garden east of Long Beach—picnic lunch at noon (coffee will be served) at Recreation Park, 7th and Park, Long Beach. In afternoon visit gardens of Mr. Sherfy, Mr. and Mrs. McGaughey and The Kennedys. The National Society is glad that two guest clubs will be present at this outing—the Cactus Exchange and the Long Beach Cactus Club.

## Monday, August 29th

Meeting of delegates from Affiliated Societies in A. M. at garden of W. T. Marshall, 327 No. Ave. 61, Los Angeles, for discussion of problems of mutual interest to Society and Affiliates. Visits to Huntington Botanic Gardens and other fine collections will be arranged for delegates.

## Labor Day Trip

A personally conducted Labor Day excursion to Lower California by Howard Gates. Reservations can be made at the Long Beach meeting.

## Will YOU Help?

While planning months in advance we need your help on the following subjects. You do not require literary style because some of the most valuable information is received in note form. The manuscript need not be typed unless convenient for you. Send in notes *now* and share your experiences with your fellow members. Never, in the history of the *Journal*, have we such a mass of fine material and even though it is not printed immediately, it will fit into series of articles being planned months from now.

Affiliated Societies should send in lectures or talks given by their own members—even talks by amateurs would be most helpful to others. The Oklahoma Society has sent in several and we have heard of others that should have reached us. We plan to print this series so that they can be sent to groups without requiring their return.

There is a need of reports, from different parts of the United States, stating what cacti or other succulents have flowered, when they flowered, how long the flower lasted, method of cultivation, etc. Imagine the value of this list to you! Send in your report once a month and see the final report.

We always like to know what plants are hardy and which make good growth in your locality.

*Desert*—June, 1938, contained an excellent photograph of *Machaerocereus eruca* (Creeping Devil) flowering in Mr. E. C. Rost's garden in California. He says, "Little has been published in regard to the flowers of *Machaerocereus eruca*. In 1898 Schumann described them as 'yellow.' Britton and Rose were apparently skeptical of this statement for in Volume II of *The Cactaceae* they merely say: '... flowers described as yellow.' Berger also queries Schumann's statement.

"I have personally, not once but many times, seen large groups of these remarkable plants in bloom in their native habitat. Individual specimens have also blossomed in my own garden. Therefore, I can state with positivism that the flower is diurnal, delicately fragrant, 10 to 12 cm. long, 8 to 10 cm. in diameter, tube slender, about 10 cm. long; perianth segments white at base shading into pale but warm rose-pink, suggestive of lavender; pistil and stamens pale yellow; ovary spiny; fruit scarlet."

## ONE OUT OF 900

Kimball Turner of Massachusetts sent in four new memberships with this statement, "You asked each member to get new members; well, here is my share and I expect to have two or three more in another month. Now, you bring on the colored plates.

## MEMBER IN HIGHEST STANDING

It takes an English subscriber to set records in helping the *Journal*. Mrs. Vera Higgins, author, translator, Secretary of English Society and Editor of *The Cactus Journal* of Great Britain, has extended her membership in our Society until August, 1940!



*Haworthia fasciata*, (Willd.) Haw., nat. size.

## Notes on Haworthias

By J. R. BROWN

*Haworthia fasciata*, (Willd.) Haw. Revis. (1821) 54; Bak. in Th. Dyer Fl. Cap. VI (1896) 340; Berger in Pflanzenreich IV. 38 (1908) 90; Poelln. in Repert. Sp. Nov. XLIII (1938) 94.—*Aloe fasciata*, Salm, Monogr. (1836-49) sect. 6. fig. 15—*Apicra fasciata*, Willd. in Berl. Mag. V (1811) 270. Plant stemless with numerous (40-60) leaves forming a dense rosette. Leaves lanceolate-deltoid, acuminate, erect-incurved, 3-4 cm. long and 10-13 mm. wide at the base, face flat or slightly rounded, smooth, somewhat glaucous green, slightly shining, back very convex, lightly keeled towards the tip and with 15-20 transverse, more or less confluent, bands of white tubercles.

Peduncle slender, simple or branched; bracts small, deltoid, acute; pedicels 4-6 mm. long; perianth 15-20 mm. long, somewhat reddish tinged, the recurved segments half as long as the tube.

Introduced about the year 1800, and first noticed by Willdenow in the Berlin Botanic Gardens.

Locality: Type locality unknown. In recent times recorded from the following localities, Bethelsdorp near the Zwartkops River; Uitenhage Distr.; Humansdorp to Port Elizabeth.

As may be seen from the illustration, *Haworthia fasciata*, (Willd.) Haw. is a rather small plant while most of its forms are slightly larger in size. This sp. and its forms are probably among the finest appearing of Haworthias, noticeable in their symmetrical and clean cut outlines and the well defined markings on the backs of the leaves.

The greatest beauty of this and other similarly marked Haworthias is retained where they are grown with considerable protection, as, when exposed to the sun, etc., they quickly assume a brown color and the leaf tips soon wither.



Elephant Trunk Tree (*Elaphrium microphyllum*) from Dry Lake Valley, Calif.  
Photo by Cyrus S. Perkins.

## Elephant Trees

By CYRUS S. PERKINS

*Elaphrium* and *Pachycormus* are the two genera of the plant kingdom whose members are more commonly known as elephant trees. Even at a quick glance one can readily see where this name came from. Twisted branches grow in all directions from a squat, barrel-like trunk, reminding one of an elephant's head sprouting many trunks. One might imagine that once the trunk was longer and more evenly shaped, but that, like a wax candle under the hot desert sun, it melted into the short, misshapen heap it now is.

Many species of *Elaphrium* are found throughout Sonora, Mexico and Baja California. One kind, *Elaphrium microphyllum*, comes into the United States in small areas in Southern California and Arizona. There is but one species of the genus *Pachycormus*; this is *Pachycormus discolor* and is found only in Baja California and on Cerros, an island three hundred miles down the coast of Baja California. The above named species of *Elaphrium* and *Pachycormus* constitute the only group known as true elephant trees.

The presence of *Elaphrium microphyllum* on the dry plains and hillsides of Sonora and Baja California to Zacatecas, Morelos and Puebla has

been known since about 1760. It was discovered in Arizona many years ago, and although reported in Southern California also, it was not until recently that a huge grove of about a thousand trees was found in San Diego County, California. The tree sometimes reaches a height of thirty feet; most of the trees, however, are between eight and twelve feet high. Mexicans often call it Torote or Copal. The word Copal is of Nahuatl origin and is usually applied in commerce to resins which come from Africa, the East Indies and South America, places where most of the commercial resins come from. The trunk is covered with a thin, yellowish bark which peels off in papery sheets exposing the green under-surface. The upper branches are red in color and are covered with little green leaves which come in fern-like clusters. The sap is of a light amber color and flows so rapidly, that when the tree is cut, it gives the impression of bleeding. It contains an oil with a strong, aromatic odor something like cedar. This true elephant tree is of great commercial importance. Its sap is used as a cement and for varnishes and lacquers; the Indians use it as incense in their churches and for a domestic medicine. The bark is used in



Elephant Trunk Tree (*Pachycormus discolor*) from Cerros. Photo taken on Cerros by Cyrus S. Perkins.

tanning and dyeing, and an infusion of the bark is said to be a popular cure for venereal diseases. A final use for this tropical plant is the utility of its branches for basketry by the Sonoran Indians. *Elaphrium microphyllum* is well named. *Elaphrium* comes from the Greek word, *elaphros*, meaning light in weight; the combination of the words *micro* (little) and *phyllo* (leaf) gives one of the characteristics distinguishing this species from other members of the same genus.

As has been stated before, *Pachycormus discolor* is found only on the plains and mountain slopes of Baja California and on Cerros Island. It ranges in height from six to sixteen feet and has a shorter and heavier trunk than do members of the genus *Elaphrium*; the branches, too, are larger and thicker and much more crooked. Some of the branches run along the ground and extend as far as twenty or twenty-five feet from the trunk. The entire tree is covered with a dull grey bark. The leaves are three to ten millimeters long and are oval or oblong in shape; the flowers are yellowish, pink or red. This remarkable plant is leafless for most of the year.

Its wood can not be used as can that of *Elaphrium microphyllum* because it is soft and porous and decays easily. The sap is milky and does not flow rapidly; instead, it soon hardens into a resin of no commercial importance. However, huge quantities of bark have been exported for tanning. This tree is perhaps, even better named than the former. The combination of the Greek words *pachys* (thick) and *kormos* (trunk) gives an appropriate generic name; the specific name *discolor* is also very descriptive.

San Diego, Calif. 6-15-38.

NOTE: When the Society pilgrimage to Martinez Canyon assembled on Sunday, June 26th, considerable interest was shown in the report of the discovery of the Elephant Tree in that canyon. On investigation, the trees in Martinez proved to be *Elaphrium microphyllum*, familiar to travellers in Arizona and Sonora and not the *Pachycormus discolor* of Baja California. Elephant Trees so familiar to us through the plants imported by Howard E. Gates are widely distributed in cactus collections by him.

Mr. Perkins' article on these trees is especially valuable at this time when interest in the Elephant Tree is widespread and most of us are confusing the new California discoveries with the Baja California plants.

W. T. M.



## Notes on Crassulaceae

New combinations in two genera

By ERIC WALTHER, *Botanist, Golden Gate Park.*

One of the reproaches most frequently levelled at taxonomic botanists, by the amateur trying to master a few of those difficult Latin or Greek plant names, is that these last are forever being changed for no good reason, and that therefore, it is useless to even try and keep up with "those botanists." In our present contribution we are doing more of this supposedly deleterious and useless name-changing, probably in order to perpetuate our cognomen as author of the resultant new combinations; but we wish to make use of this opportunity to illustrate, not only the necessity for some such changes of name, but the rules under which these are made.

The occasion for the present changes arises from our study of *Echeveria* and its various species. In 1903 Dr. Rose had described, from a dried herbarium specimen, *E. minutiflora* from the state of Puebla in Mexico; and even in the *North American Flora* of 1905 he still retained the species in that genus. Not until 1909 did Britton and Rose recognize that rightfully this species could not be placed into *Echeveria* and erected the new genus *Thompsonella* to receive this and one other species.

However, when in Mexico on our second trip, we had tried very hard to obtain the type-species of the genus *Villadia*, i.e. *Villadia parviflora*, spending a whole day on Mt. Zacoalco near Guadalupe. Our search revealed nothing beyond the common *Sedastrum ebracteatum* and *Altamiranoa* sp. on some rocks where they were inaccessible to the ubiquitous goats, but no trace of what might be construed as the desired *Villadia parviflora*. The last mentioned species had originally been gathered by M. Bourgeau of the Scientific Commission busy in Mexico during the brief reign of Emperor Maximilian, which material had been described by Hemsley, in the "*Diagn. Pl.*," as *Cotyledon parviflora*.

When in 1903 Dr. Rose founded the genus *Villadia*, in the "*Bulletin of the New York Botanic Garden*" he definitely designated this *Cotyledon parviflora* of Hemsley as the type-species of his new genus, which, under the accepted rules must therefore stand or fall on this selfsame *Cotyledon parviflora*, regardless of any errors in the description published at the time. Now it happens that the type, on which Rose based his conception of the species, was imper-

fect, lacking the basal leaves as was clearly stated by Hemsley, and so does not permit of clear observation that the inflorescence is lateral and arises in the axils of the basal leaves.

Our attempt to find living plants having failed, we were still puzzled by the matter, the more so as we had gathered and flowered in cultivation living plants of both species of *Thompsonella*. As far as the description went, there appeared to be no reason why the imperfect specimen of *Cotyledon parviflora* Hemsley could not be identical with *Echeveria*, or *Thompsonella minutiflora* of Rose. To settle the interesting question, of importance largely because of its phylogenetic implications, we enlisted the cooperation of the Royal Botanic Gardens at Kew, where the type of *Cotyledon parviflora* was deposited and finally, through the courtesy of A. A. Bullock, obtained the clear photograph here reproduced. This photograph is abundant proof that our suspicions were justified and that Rose's type of the genus *Villadia* is identical with his type of *Thompsonella*. Under the accepted rules the last mentioned genus must therefore be dropped as invalid, the two species being the only real *Villadia*'s permissible. Remains now the question of what name to use for the other, former species of *Villadia*, which differ from the *Ex-Thompsonella*'s in having a terminal inflorescence, and lack the large, rosulate basal leaves of *Thompsonella*. Since *Villadia* is unavailable, we are faced with the necessity of either coining a new generic name, or placing the species into an existing genus. Examining the critical generic characters, we find that the various species in question differ from *Altamiranoa* of Rose mainly in having an equilateral inflorescence instead of a secund one. Now this same criterion, if consistently applied to *Echeveria*, would compel division of that genus into at least two distinct genera. For numerous cogent reasons we do not see fit to split up *Echeveria* any further, so consistency compels us to merge the great mass of Dr. Rose's species of *Villadia*, excepting always *V. parviflora*, with *Altamiranoa*. The various new combinations becoming necessary are made herewith. Incidentally, the genus *Altamiranoa* may with advantage be divided into two Sections, i.e. *Eu-Altamiranoa* and *Villadiopsis*, also characterized on the attached sheet.



UPPER LEFT: *Villadia platyphylla* (Rose) E. Walther, app. x 0.5. LOWER LEFT: *Villadia parviflora* (Hemsley) Rose, app. x 0.6. (This is the type of Rose's *Thompsonella minutiflora*; as published in "Cont. U. S. Nat. Herb." 12-9-pl. 44.) UPPER RIGHT: *Allamiranoa ramosissima* (Rose) E. Walther, app. x 2. LOWER RIGHT: *Villadia parviflora* (Hemsley) Rose; app. 0.5; photo of type-specimen from the Kew Herbarium, Royal Botanic Gardens, courtesy of Mr. A. A. Bullock.

Villadia Rose, (as typified by the type-species, *V. parviflora* (Hemsl.) Rose; character as of *Thompsonella* Britton & Rose, in Cont. U. S. Nat. Herb., 12:9:391; 1909).

*V. parviflora* (Hemsl.) Rose.

(*Cotyledon parviflora* Hemsl., *Echeveria minutiflora* Rose, *Thompsonella minutiflora* B. & R.)

*V. platyphylla* (Britton & Rose) E. Walther, comb. nov.

(*Thompsonella platyphylla* B. & R., *Echeveria planifolia* Berger.)

Altamiranoa Rose (as rectified by E. Walther and including species both with secund and equilateral inflorescences).

Type species *A. mexicana* (Schlecht.) Rose.

Altamiranoa Section Eu-Altamiranoa E. Walther, Sect. Nov.

Character of the Section: *Altamiranoa* Rose, in Bull. N. Y. Bot. Gard. 3:31:1903.

Type-species of the Section: *A. mexicana* (Schlecht.) Rose.

(For list of species; see Rose; North Am. Flora; 22:2:49; 1905; also A. Berger; Engler's Pflanzenfam.; 18a:469-470; 1930.)

Altamiranoa Section Villadiopsis E. Walther, Sect. Nov.

Character of the Section: *Villadia* Rose, l.c. 3:3:1903; as pertains to the description only.

Type-species of the Section: *A. albiflora* (Hemsl.) E. Walther, comb. nov.

(Known species of the Section *Villadiopsis* E. Walther.)

*A. albiflora* (Hemsl.) E. Walther, (*Cotyledon albiflora* Hemsl.; *Villadia albiflora* Rose.

*A. cucullata* (Rose) E. Walther, comb. nov. (*Villadia cucullata* Rose.)

*A. diffusa* (Rose) E. Walther, comb. nov. (*Villadia diffusa* Rose.)

*A. guatemalensis* (Rose) E. Walther, comb. nov. (*Villadia guatemalensis* Rose.)

*A. imbricata* (Rose) E. Walther, comb. nov. (*Villadia imbricata* Rose.)

*A. levis* (Rose) E. Walther, comb. nov. (*Villadia levis* Rose.)

*A. minutiflora* (Rose) E. Walther, comb. nov. (*Villadia minutiflora* Rose.)

*A. nelsoni* (Rose) E. Walther, comb. nov. (*Villadia nelsoni* Rose.)

*A. painteri* (Rose) E. Walther, comb. nov. (*Villadia painteri* Rose.)

*A. pringlei* (Rose) E. Walther, comb. nov. (*Villadia pringlei* Rose.)

*A. ramosissima* (Rose) E. Walther, comb. nov. (*Villadia ramosissima* Rose.)

*A. squamulosa* (S. Watson) E. Walther, comb. nov.

(*Sedum squamulosum* S. Watson, *Cotyledon parviflora squamulosa* S. Watson, *Villadia squamulosa* Rose)

*A. stricta* (Rose) E. Walther, comb. nov. (*Villadia stricta* Rose.)

## MY TEN FAVORITE SUCCULENTS

This morning after breakfast, I went out into the garden and tried to determine just which succulents I could do without. After making a list of about seventy-five of my favorites, I narrowed that list down to the following. There is no rhyme or reason to this list; not being especially good for beginners, nor particularly uncommon. They are just the ones I couldn't do without.

*Aeonium tabulaeforme*. This is the first succulent I ever owned, and while its temperamental growth is a problem, the inlaid leaves, and the symmetrical flatness make it my number one favorite.

*Fenestraria rhopalophylla*. The prettiest of all. Hot-house grown plants with their soft green "toes," each tipped with a white window, invariably arouse admiration.

*Kleinia pendula*. The unusual growing habit and bright red flowers of the "Inch Worm" are enough for a place on my list.

*Agave parvifolia*. This, one of the smallest of

the Agaves, is most attractive with its peculiar white markings; even surpassing *Agave victoriae-reginae*.

*Euphorbia valida*. A gingham ball, easy to grow, and to me, a most attractive pot plant.

*Echeveria setosa*. Soft, downy leaves, and pretty red and yellow flowers. A most delicate appearing plant.

*Kalanchoe pilosa*. Another delicate appearing plant, but more grotesque with its scorched edges.

*Euphorbia pseudo-cactus*. This is one of the most outstanding Euphorbias. Its beautiful markings as well as strong growth make a very spectacular plant.

*Haworthia fasciata*. Not unusual, but still a charming plant.

Last, but not least, the lovely little *Lithops bella*. Dainty white blooms emerging from a dull gray rock cause murmurs of disbelief from those who view this charming little mime.

MARY JANE BAUER, Calif.

Every other month, the *Journal* will contain 8 pages of the Illustrated Glossary thus continuing 4 pages monthly until completed.





### A NEW SPECIES

*Mammillaria insularis* sp. nov.

By HOWARD E. GATES

Herba ut videtur caespitosa erecta vel adscendens e fasciculis radicibus carnosissimis incrassatis nascens; caulibus subglobosis ca 6 cm. altis 5 cm. latis; tubercula truncataconica ad basim angulata; jus clarum viscidumque; areolae orbiculatae tomentosae 2 mm. diametro; spinae laterales 20-30 aciculares 5 mm. longae albae, spina centralis solitaria 1 cm. longa porrecta basim leviter incrassata apice nigra ad basim lutea vel brunnea; flores 15-25 mm. longi late infundibuliformes, perianthii segmentis exterioribus 10, lanceolatis viridibus apice acutis, exterioribus ca. 12, integris roseis, nervo medio albo; fructus clavatus 1 cm. longus 3 mm. diametro rubens, seminibus nigris globosis 1 mm. diametro.

Roots very heavy, fleshy, divided and tapering into fibrous rootlets; plants deep seated, cespi-

tose; branches numerous arising from both roots and axils, flattened globular to 6 cm. high, 5 cm. in diameter; tubercles in spiral rows, 7 mm. high, 7 mm. in diameter, conical, truncated, bases angularly compressed by adjacent tubercles, blue green, surface slightly cerulate, sap clear, viscid; axils naked or slightly lanate; areoles circular, 2 mm. in diameter, white woolly; radial spines 20-30, 5 mm. long, stiff, acicular, widely spreading, white; central spine 1, 1 cm. long, acicular, porrect, small hooked, hooks turned laterally, base slightly bulbous, tips black shading through brown to yellow; flowers 15-25 mm. long, funnellform, wide spreading; outer perianth segments 10, lanceolate, tip acute, light green; inner perianth segments 12, margins entire, light pink with white mid stripe; fruit 1 cm. long, 3 mm. in diameter, clavate, orange red, smooth, tending to be hollow; seed less 1 mm., irregularly globular, slightly pitted, dull black; hilum flat, reddish brown.

Type Gates No. 523 collected along mica schist ledges on easternmost islet of Smith Island group, Los Angeles Bay, Lower California, (Lat. 29° 5' N., Long. 113° 30' W.) May 11, 1935, and deposited in the Dudley Herbarium of Stanford University. The distribution is apparently confined to this group of small rocky islets, hence the specific name.

Flower description from field observations of George Lindsay Aug. 10, 11, 1936. Fruit description from cultivated plants. Latin digest prepared by Dr. Ira L. Wiggins.

To the author, this is one of the most interesting of his many Lower Californian discoveries. Its habitat is one of the driest localities imaginable and a very warm place most of the year. It bears quite a resemblance to *Bartschella schumannii* from the southern tip of the peninsula in shape, size and color of both branches and flowers. However, it differs from *Bartschella* in having much heavier roots, a tendency to branch from the roots, distinct tubercles which are not joined laterally, more numerous and weaker radial spines which are all white and much shorter and smaller fruit. The type plant came from an islet that is the nesting place of sea gulls. Very few plants are under cultivation owing to its isolated and inaccessible habitat, but it promises to be one of the most attractive species.

It may be stated here that the Nomenclature Committee of the Cactus and Succulent Society of America recommends that the genus *Bartschella* be discarded and the species *schumannii* be listed as *Mammillaria schumannii* Hildman.

Messrs. Britton & Rose set up the genus *Bartschella* because of its large flowers, black seeds and circumscissile fruit. Several recognized *Mammillarias* have as large flowers, many have black seeds and several, notably *Mammillaria denudata*, have a tendency to be hollow and drop their seed through a basal pore as the fruit falls. Consequently these factors are not unique to the genus *Bartschella* and the separation appears to be un-justified.

#### APPEAL TO READERS OF THE B. F. K.

August 1, 1938

I find myself obliged to send out the following appeal to my readers:

The enclosed number of the B. f. K.,\* which closes the first half-year of 1938, presents for the first time since the American, Dr. Rose, a complete survey of the *Cactaceae* in the form of large, systematic revision. Herewith the B. f. K. had reached its zenith, the aim for which it was produced! It will probably be years before the whole work offered is really recognized. The present issue shows, however, how much of importance and of interest still remains to be published, for we stand at the beginning of a new epoch of research of the most remarkable plant family in the world . . . !

But unfortunately, with this issue of the B. f. K. I must discontinue its publication! I have not, however, the means to carry the burden alone any longer and as regards the taking over of the B. f. K. by the Deutsche Kakteen-gesellschaft, Herr Dölz and I have gone thoroughly into the matter and rejected the idea till we see first if it is possible to keep the present form and standing of the B. f. K., in view of the quantity of material that remains to be published.

Therefore I address this appeal to my readers: support my work, let us form a partnership of those who are willing to help in the research on the *Cactaceae*. Write me that you are willing to pay a sum of RM 3 (approx. \$1.35) which will assure the continued existence of the B. f. K. Payment will not be required until requested. I must first see if the continuance is really assured. As soon as all the declarations have been returned, you will be notified.

CURT BACKEBERG.

\*EDITOR'S NOTE: This 28 page booklet is a summary or conclusion of the author's research and will be reviewed by Dr. Poindexter as soon as the author replies regarding the translation of several German terms.

Herr Curt E. Backeberg is the well known author of *Neue Kakteen, Kakteenjagd, Blätter für Kakteenforschung*, and numerous other books as well as co-author of *Kaktus-ABC*. Not only director and participator of seven expeditions into the cactus country of North and South America, he is a lecturer, collector, explorer, describer, classifier, propagator and distributor. Rather a large list of personal achievements yet always willing to give credit to contributors whether their contributions be constructive criticism, friendly opinions or plant material. Quoting from *Zehn Jahre Kakteenforschung*, "—deepest appreciation and gratitude to those who have assisted me in my *Bulletin for Cactus Research*: V. Morawetz, Mrs. Webster, Harry Johnson, Dr. Poindexter, and Hummel." Seldom do Am-

ericans receive this consideration from outsiders.

How often the results of years of study and investigation by scientific workers, which makes life more interesting for us all, is taken for granted and not always appreciated. To students of the *Cactaceae* such plants as *Echinopsis kratochviliana*, *Lobivia cylindrica*, *Pilocereus atroviridis*, *Trichocereus auricolor* and numerous other new introductions are taken for granted and enjoyed with little thought of one of the world's most foremost collectors, students and describer of cactus plants.

His work *The Bulletin of Cactus Research* (commonly referred to as B. f. K.) is an evolutionary hypothesis based on the work of Drs. Britton and Rose, Alwin Berger and others, plus observations made by himself both in the field and at home. This monthly magazine represents one of the most outstanding and helpful works published in recent years.

We must not make the mistake of considering botany as an exact science such as mathematics. We would no doubt be very much surprised to note that someone had discovered that two and two does not make four as we have always been taught. However, we need not be startled unduly to discover that upon study and clearer understanding of the relationships, *Echinopsis aurea* has been found more likely to belong to the genus *Lobivia* than that in which it has been placed by Britton and Rose. Neither should this in any way reflect on the ability of those most capable students of the *Cactaceae*. Even during a lifetime, in fact during a very few years of earnest study, a scholar of botany may find sufficient reason for changing his opinion himself concerning the standing of certain plants. My contention is that criticism should be tempered with understanding of the noteworthy task the botanist has taken upon himself.

Descriptions given in *The Bulletin* could no doubt be more elaborate with very satisfactory results. Yet in order to procure sufficient monetary returns it was necessary to publish this work in four languages as the number of people interested in scientific classification in any country is not large.

Friction and contention among botanists and student should be entirely ignored and each and every person who has made extensive research in any field should be encouraged to put his theories before the public that they may be studied and accepted or rejected. We must all agree that a work by such an able student of cactus plants cannot be valued in dollars and cents. We are interested in the plants themselves and to study these we must have literature whether we agree with it or not. We truly hope we can look forward to many years of *The Bulletin of Cactus Research* and believe that research along these lines will suffer a decided setback if these monthly pamphlets are discontinued. We feel that any student whether professional or amateur could receive no more interesting information than is included in this work from 1934 to 1938, consisting of approximately 250 pages with about two thirds that number of illustrations and descriptions. The cost of this is \$4.50 including binder and postage and we consider this an excellent investment in cactus knowledge. If you are already a subscriber we believe it would be advisable and most encouraging to the author if you would drop him a postcard assuring your support for the forthcoming year. For your convenience, the Editor, Scott E. Haselton, Box 101, Pasadena, California, will gladly send the list of supporters to Mr. Backeberg.

E. C. HUMMEL.

## Succulents at Greater St. Louis Flower and Garden Show

By LADISLAUS CUTAK, in charge of Succulents, Missouri Botanical Garden

St. Louisans and visitors to our city had the opportunity to witness a mammoth flower show, occupying approximately five acres of floor space, during the nine day period allotted for this event. From March 26th to April 3rd, inclusive, the spacious "arena," one of the country's huge amphitheaters, was transformed into a vast fairyland of riotous colors where the sweet scents of countless flowers permeated the atmosphere. In the main Arena-building a large electrically-lighted fountain spouted torrents and sprays of be-jewelled water to a considerable height and its playful mood was a constant delight to the thousands who stopped to watch the antics of this colored water-god. Around this multicolored fountain and radiating to all corners of the arena were hundreds of cut flowers, arranged in tall vases, changed daily, and spectacular beds of ferns, palms, tulips, hyacinths, cinerarias, amaryllis, calceolarias, and other exotic plants. At the far end of the main building, occupying huge shadow-box booths, was the orchid display of the Missouri Botanical Garden. Against a background of black velvet and lucid green of maidenhair ferns, were grouped some rare slipper orchids, fragile dancing girls, white and pink moths, cymbidiums, and many other rare botanical types.

The east and west buildings were devoted to woodland scenes, rock gardens, rose gardens, gardens of artistic design, outdoor living rooms, and various amateur exhibits. Of outstanding interest were the following: a typical Ozark garden complete with a moss-covered mill and mill stream; a desert garden of cacti and succulents; a large rustic church covered with pink rambler roses; Mexican patio garden; and the two other exhibits of our Garden, featuring azaleas. The Missouri Highway Department had a spectacular exhibit, worthy of the work they are doing in the beautification of our roadsides.

Succulents at the Greater St. Louis Flower Show were not numerous, yet what few there were, these held the eye of the visitors. Only one large garden was devoted exclusively to succulents, but there were several other displays featuring these plants. Mr. Zee Young of Overland, Missouri, an enthusiastic cactus fan, displayed an artistic arrangement of cacti, aloes, and other succulents in a garden covering 300 square feet. Young is just an ordinary working man, who finds enough time in his leisure hours to work with his pet hobby. This was the first time that he exhibited anywhere and he certainly did a fine job. His display included over one hundred species of odd succulents; among these the most conspicuous being *Lemireocereus griseus*, *Echinocactus grusonii*, *Cereus jamacaru*, *Cephalocereus polylophus* and *senilis*, *Pachycereus marginatus*, *Acanthocereus pentagonus*, *Opuntia undulata* and *subulata*, *Portulacaria afra*, *Yucca aloifolia*, *Agave decipiens*, and various aloes, agaves, stapelias, mesembryanthemums, sedums, gasterias, haworthias, and echeverias.

Fred Endres and Son of the City of Ladue arranged an artistic semi-formal rockery, covering 1600 square feet. Water trickled from a rockery in a far corner and formed a stream, that meandered through the center, the banks and pockets in the rock being conspicuously planted with incidental plants, including such succulents as the hardy Missouri prickly pear cactus, *Sempervivum*, sedums, and the very showy *Euphorbia myrsinites* in full bloom. The Gern Nursery of Affton, Missouri, arranged a rock garden covering 600 square feet and won first prize in this class. Honey-combed limestone was used throughout and plants included were tulips, phlox, bleeding hearts, sedums, and the

very showy *Mesembryanthemum roseum*. O. E. Goetz of St. Louis County won second prize in this same class, his garden being composed of a pool and stretches of green lawn, with small rockeries in the background and at the corners given over to sedums, *Sempervivum*, hardy *Opuntias*, etc. The St. Louis Park Department featured a large estate garden with rolling lawns and a winding pool, the water originating in a naturalistic rockery in the background, which was planted out with flowering azaleas, ferns, and the picturesque *Echeveria glauca*. Also in the plantings were evergreens, forsythias, flowering almonds and *Yucca filamentosa*.

The St. Louis Board of Education had two exhibits, both formal gardens, in which *Echeveria glauca* played an important part. The St. Clair Garden Club of East St. Louis, Illinois, featured a patio garden in Old Mexico, planted out with bougainvillea, *Ficus*, and a niche in the wall accentuated by a flowering *Kalanchoe blossfeldiana* in an iron container. The Union Electric Company of Missouri had an interesting educational exhibit, *Kalanchoe blossfeldiana* again being featured. In class 43, featuring group of stove and greenhouse foliage plants, covering 100 square feet. Sietloff Floral Company came out second best. Here, credit must be given to Mr. Gus Bantel, the grower, who is another succulent plant enthusiast, and who had developed some very interesting forms with the semi-succulent *Sansevierias*, exhibited at this show. From thousands of leaf cuttings of *S. trifasciata* var. *Laurentii*, about ten highly unusual forms were the result and now, after eight years, they are still retaining their individual characteristics. All are slow propagators, though.

The United States Postal Employees sponsored a national air-mail flower show and their section was always crowded with people to view their unique exhibits. On Thursday, March 31, planes from all sections of the United States, Canada, and the Canal Zone raced to St. Louis carrying hundreds of floral exhibits for displays at this show. There was a beer keg covered with blue and white statice, complete with spigot, sent by the Milwaukee postal employees; there was a huge bouquet of spring flowers gathered in Bermuda; giant hybrid narcissus came from Vancouver, British Columbia; gardenias from Lakeland, Florida; pussy willows from Iowa; hybrid *Watsonias* from San Diego, California; and orchids of exotic beauty from half a dozen cities. The most unique exhibit and one that brought no end of comments seemed to be the "spoon lilies" sent by the postal clerks at Douglas, Arizona. These ivory spoon lilies were not flowers in reality, but cut leaves of *Dasyliroon wheeleri* stuck in a vase. That the basal parts of leaves of these Sotol plants resemble huge petals cannot be denied, and several of these inverted leaves certainly make a unique decoration for the table, mantel, etc. Whoever conceived this idea, it was a clever one, but I do hope the fad will not become too great to despoil the deserts of this characteristic *dasyliroon*. I note one floral shop in Tucson is advertising "spoon lilies" at one dollar a dozen. Another outstanding exhibit consisted of Texan bluebonnets, in the shape of the map of Texas with a small nipple cactus marking the location of San Angelo, from where this display was air-mailed to the St. Louis show.

The Flower and Garden Show was indeed a great show, as expressed by 135,000 school children and adults who witnessed the pageant and we sincerely hope this event will become an annual or perhaps biennial affair.



"!GAAP"

A rare 4-lobed flower of *Stapelia flavirostris*.  
Photo from G. Daly, Somerset East.

## !GAAP

Mr. David Pringle, who contributed Appendix G on Vernacular Names to our *Stapelia* book, has recently interested himself in trying to discover something definite regarding the origin of the mysterious name, "!Gaap," applied by the Bushmen to such plants as *Stapelia flavirostris* and to all *Hoodias* and *Trichocaulons*.

Mr. Pringle has consulted Dr. H. Vedder of Okahandja on the subject, Dr. Vedder being the recognized authority on the subject of the Bushman language. Dr. Vedder points out that the language of the Bushmen in the northern part of South West Africa, where he lives, differs only as a dialect from that of the Nama Hottentots, and that the word "!Gaap" is clearly a word of Bushman origin, spelled !Gab according to the usage of the present day. The word means Poison.

In passing it should be noted that the spelling of the word with the mark "!" before it indicates that the word is to be pronounced with a ripe Bushman "Click." Sometimes this click is indicated by placing the letter "N" before the word, "Ngaap," but this according to Dr. Vedder has

no sanction in the Bushman language. It may have been adopted from Central African custom, where it is used in such names as Ngamiland. But for a Bushman word it is entirely incorrect.

A curious fact is that, of all the *Stapeliads* with which the name "!Gaap" is connected, only the pubescent stemmed *S. flavirostris* is poisonous. *Hoodias* and *Trichocaulons*, as we shall see presently, are not poisonous, and it is largely to these that the name, "!Gaap," is assigned to-day, with many corrupted forms, such as !Ga and !Gapies, Ngaap and Guaap.

The form of the name most used by the Bushmen for *S. flavirostris*, according to Dr. Vedder, is "Gaxas," a noun derived from the adjective !Gaxa, poisonous.

By the Hottentots of Namaqualand, *S. flavirostris* is called "Xaia-Xob," a name derived from two nouns meaning respectively a swelling and the inside of the cheek or mouth, the combination giving an expressive idea of the local irritation caused by indulgence in this sort of food. To pronounce the word "Xaia-Xob," it should be noted that the Bushman "x" is pronounced



like "ch" in the Scotch word, *loch*, and the "a" with a circumflex accent with a nasal twang.

The application of the name "Gaap" to the *Trichocaulons* is not clear, inasmuch as they are not poisonous, but have a pleasant flavor not unlike licorice. It may have been applied by some early settler, who had heard the name used for the widely distributed *S. flaviviridis*. Actually the spiny *Trichocaulons*, according to Dr. Vedder, are known to the Bushmen and Nama Hottentots alike as "Goas," a name of unknown meaning.

The *Hoodias* are locally known as 'Knowas, meaning a thing which bursts wide open, in reference doubtless to the large wide open flowers so characteristic of the genus.

The word "Gaap," having once taken on an association with these different *Stapeliad* plants in the minds of the settlers, we find it appearing in combinations such as *Slanggaap*, *Wildeggaap*, etc., that is compounded with words of Afrikaans, and no longer Bushman, origin. *Slanggaap* (Snake Poison) may have been applied to *S. flaviviridis* by way of emphasis, to explain that the plant is as poisonous as a snake; or perhaps the poison of the plant is mixed with real snake poison to make a doubly potent combination. *Wildeggaap* is the form of the name applied to *Hoodias*. Here "wilde" may mean wild, or it may come from the root "wel," meaning good, to indicate that the *Hoodias* are edible, or good "Gaaps."

Dr. Vedder emphasizes the point that the Bushmen give names to all objects for which they have an actual use, such as *S. flaviviridis*, which they may use as a source of their arrow poison, or the *Hoodias* and *Trichocaulons*, which may be a valuable food in dry seasons. But for useless plants or other objects, they have no names, since no occasion to speak of such things is likely to occur.

ALAIN WHITE AND BOYD L. SLOANE.

#### NEW OFFICERS

Long Beach Cactus and Succulent Society elected the following officers:

Chas. P. Sherfy, *President*  
R. S. McGaughey, *Vice-President*  
Geo. W. Becker, *Secretary-Treasurer*

#### CORRESPONDENTS WANTED

Mrs. H. C. Dorne, Box 526, Mount Dora, Florida.

**THE STAPELIEAE**—By Alain White and Boyd L. Sloane. The first book on *Stapeliads*. Published in 1933. A very few of this first edition available at \$3.00. Express charges collect. This edition will be a rare book item.

**MESEMBRYANTHEMA** by Brown, Tischer, Karsten. \$8.75.

#### BOOK REVIEW

INDEX TO SPECIES OF THE GENUS *MESEMBRYANTHEMUM* L. WITH RELATED GENERA. Including the synonyms, renamings, location and the lecture. (In German language) by H. Jacobsen, Curator of the Botanic Gardens Kiel, Germany.

An important work on the genus *Mesembryanthemum* L. (180 pages 6x9).

The author has taken great pains to compare the whole of the literature on *Mesembryanthemum* nomenclature and thus brings to an end the various prevailing confusions in the genus. A necessary book for every Botanical gardener, *Mesembryanthemum* breeder and hobby worker.

The German Cactus Society, publishers of this book, notifies all specialists that this valuable work contains all renamings, synonyms, and above all the correct names and locations for the numerous species of this large genus. The edition of the work is such that it can be used by all workers without any great knowledge of the German language and is most valuable even without illustrations.

For members of the Deutsche Kakteen-Gesellschaft and of foreign societies by direct orders from the Deutsche Kakteen-Gesellschaft 11 RM. Postage paid.

Dr. Friedrich Dobe, Secretary, Berlin NO43, Am Freidrichshain 3, Germany.

#### MAGAZINE REVIEW

*Kakteenkunde* for July (1938)

This excellent number contains the current installment of *The Cactus Growers' Encyclopedia* and useful cultural notes for the current time of year.

Dr. Werdermann illustrates and tells about *Pachyphytum Werdermannii*, v. Poellnitz, and contributes the July colored illustration, which is an excellent photograph of *Cochemia setispina*.

*Kalanchoe crenata* Haw. is illustrated and described.

Dr. von Poellnitz describes *Haworthia Rossouwii* and *Haworthia badia*; both original descriptions.

A brief article on cactus culture by Kurt Beyer gives the author's recipe for successful growing.

W. von Roeder contributes an excellent two-page article advising cactus lovers to take more photographs of their plants when in flower. The author regrets that so many mediocre pictures are taken and gives many bits of sound advice for the improvement of cactus photography. Among these: Larger cameras, less expensive than miniatures, gives better results. Slight movements of flowers in wind or vibration of the camera may not ruin a picture, but relegate it to mediocrity. Soft prints are necessary to show detail; most prints are too hard since cacti are exceptionally contrasty subjects.

The number concludes with an installment of *What's New in Mesems. and Other Succulents*, mentioning many new *Mesem.* species.

R. W. P.

#### WANTED

The JOURNAL needs someone who can review a few pages in the Russian language. Please communicate with your Editor.





Flowering column of *Myrtillocactus grandiareolatus* in the garden of  
Mr. G. G. Hoag, La Cañada, California

## "PADRE NUESTRO"

By JACOLYN MANNING, M.D.  
Fellow, Texas Academy of Science

With the exception of the sensationally lovely blooms of the hybrid *Epiphyllums*, comparatively little is given in descriptive literature regarding the fragrance and color, flowering habit, or the edibility and aroma of the fruit, of most cacti.

Explorers are so occupied hunting new species of cacti on the deserts and cordilleras of North

and South America, and differential diagnosis being so essential, every little spine must be counted and measured in millimeters and given its proper stance on the areole from which it springs, before the reader's senses are apprised of the paintbox hues and intoxicating perfume of flowers, and the delicate and delicious flavor of the cactus fruit.

The genus, *Myrtillocactus*, has its name from the Greek "myrtos," a small berry, the original

evergreen *Myrtis communis* of Greece. All five members of this tree-like group bear one-celled, spineless, fuchsia-tinted berries in great profusion up and down the fluting of their great columns. These delicious berries, known by the Spanish-Indian name "Garrambullas," are a favorite fruit in all the markets of Mexico, and Guatemala. They are eaten fresh from the tree, or dried and resemble seedless raisins.

In 1920 four species only of this fine group of columnar tree-cacti were known and listed in *The Cactaceae* under the names: *M. geometrizans*, *M. cochal*, *M. schenkii*, and *M. eichlamii*.

It was not until 1930 that a fifth brother of these four stalwarts was discovered in mature growth in Huntington Botanic Garden, by the curator, Mr. William Hertrich. In the same year Dr. Helia Bravo, curator of cacti, Biological Institute of Mexico, on an expedition into Oaxaca, observed this hitherto unidentified species. In May, 1931, Senora Bravo returned to observe the characteristic floration. After consultation with her American colleague at Huntington, Dr. Bravo registered a new name; to accent the large flowering areoles, the most distinctive feature, the name *M. grandiareolatus* was chosen.

The *Myrtillocacti* are a blue-blooded family. The young growth on three of the brothers is a celestial azure, only too easily marred. This delicate bloom, however, in *M. grandiareolatus* concentrates to a gray-blue-purple and all the fuchsia tints, ringing the white-felted young areoles with red, and painting the tube-like buds, and steeping the fruit in royal shades of wine and purple.

The multiple flowers at each areole, are strangely enough, a dazzling white. They resemble small single tuberoses, and are just as deliciously fragrant. They differ from the tuberoses in that the white filaments and white style and the white-green-tinged stigma lobes are very conspicuous. In one single flower fifty long filaments may be seen and counted.

This group of tree-cacti occurs in forests on the tablelands of Oaxaca, Mexico, Guatemala, and Bahia de Todos Santos, Baja California. They usually grow with short trunks and large branched tops, the stout branches nearly erect, and standing shoulder to shoulder.

The flowers are diurnal\* and comparatively small, but the clusters of four to twelve, which spring from the top of each areole, atone for dainty size by the flowery mass of the ensemble. The fruit also compensates with enticing color

and flavor and sweet, firm, juicy pulp. While the type is a round berry, the fruit of *M. grandiareolatus* is long, three times its own diameter, and wine-red when fully ripe. The tiny seed are kidney shaped and slightly pitted, and deeply embedded in the pulp. You take them whole, like an oyster or a strawberry.

Many names have been given by explorers from various continental nations to each member of the *Myrtillocactus* group. The queerest ones were ruled out by Britton and Rose in their peerless monograph. The most tender and awesome name is almost buried in Paul Standley's Hort. Mex. The name *Cereus gladiator* needs no explanation, but I spent some time considering *Cereus pugioniferus*; "pug,"—a goblin, would have been a happy cognomen for the Joshua tree; "pugnacious,"—inclined to quarrel, may have referred to the dagger spines; "pug-piles,"—piles mortised together by a dove tailed joint; "pug,"—a mill to grind brick—adobe brick?

But the name given by native Oaxacans to the tree which provided them food, drink, housing, weapons, beauty and grandeur—ah, here you touch hands with a primitive religion devoid of pomp and dogma, here prayer is enshrined, and eyes are lifted to the cerulean blue, for they called this noble homestead tree "Padre Nuestro"—Our Father.

### A SUGGESTION

May I offer a suggestion to increase interest in cacti and succulents?

In the first place, there is not enough plant material on hand. When you walk into a nursery, nearly everything that you would like to buy is marked with an invisible, nevertheless very real label: "not for sale."

In the second place, let's get together people who speak the same language. A *Mammillaria* man has nothing but deepest contempt for a *Stapelia* enthusiast, and the latter can not understand how in heaven can anyone be interested in a *Sempervivum* or *Echeveria*.

Now, if we could form groups of enthusiasts interested in the same group of plants, with an idea of meeting at different member's places and with an object in mind to bring ALL SPECIES of *Aloes*, *Agaves*, *Crassulas*, *Heurnias*, *Carallumas*, etc., that are offered on foreign markets in the form of seed or plants, to our country, we would have a program ahead that would keep us busy for years to come.

A *Stapelia* group for example could meet, and agree to bring in all known *Stapelias*, that are not available to the members. The financial burden would not be heavy, and the work would be co-ordinated, and before the year would be over, we could show results. Plants could be grown, propagated and exchanged (not sold to members). Rare blooms could be seen by all enthusiastic members, and a casual collector would gain just as much as a professional botanist.

ALBERT KREJCI.

\*Mr. Hertrich has observed that some of the *Myrtillocacti*, in the Huntington Gardens, remain open during the night.

EDITOR'S NOTE: We will be glad to have further comments on this plan which presents a real need to those wanting new material.

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## WANTED

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